

AMENDMENT TO THE CLAIMS

Please amend the claims to be as follows.

Claim 1 (currently amended): A modulator arrangement configured for maskless lithography or printing applications, the modular arrangement comprising:

at least two array tiles of modulators, each array tile having a substantially equal modulator pitch and being configured to form a plurality of rows, each row extending in a first direction, and a plurality of columns, each column extending in a second direction,

wherein the first direction and the second direction are substantially perpendicular to each other, [[and]]

wherein two adjacent array tiles are separated by

a first displacement in the first direction and

a second displacement in the second direction,

wherein each of the plurality of rows in each array tile includes a first number of modulators distributed in the first direction, each of the plurality of columns in each array tile includes a second number of modulators distributed in the second direction, the at least two array tiles are configured to move along a scan direction at an angle between the first direction and the second direction, and the scan direction is chosen to form a continuous lithographic swath having a swath width in the second direction, and

wherein the second displacement is equal to the first displacement divided by a product of a total number of array tiles and the first number of modulators.

Claim 2 (canceled)

Claim 3 (canceled)

Claim 4 (currently amended): The modulator arrangement of ~~claim 2~~ claim 1, further comprising one or more drivers coupled to each array tile.

Claim 5 (original): The modulator arrangement of claim 4,
wherein the one or more drivers are configured around each array tile on
no more than three sides.

Claim 6 (original): The modulator arrangement of claim 5,
wherein each of the array tiles and the one or more drivers are located on a
single integrated circuit die.

Claim 7 (original): The modulator arrangement of claim 4, wherein the drivers are
coupled to top and bottom sides of the array tiles, and wherein the array tiles abut each
other on left and right sides.

Claim 8 (original): The modulator arrangement of claim 7, wherein the arrangement
includes more than two array tiles.

Claim 9 (original): The modulator arrangement of claim 1,
wherein the first and second displacements are chosen such that the
modulator arrangement is configured to write pixels onto a media having
substantially complete two-dimensional swath coverage.

Claim 10 (original): The modulator arrangement of claim 1,
wherein each modulator comprises a plurality of ribbon structures.

Claim 11 (original): The modulator arrangement of claim 10,

wherein the plurality of ribbon structures includes a number of ribbons selected from a group consisting of from 3 to 15.

Claim 12 (currently amended): A writing points array apparatus configured for maskless lithography or printing applications, the apparatus comprising:

at least two sections, each section having a substantially equal writing point pitch and is configured to form a plurality of rows, each row extending in a first direction, and a plurality of columns, each column extending in a second direction,

wherein the first direction and the second direction are substantially perpendicular to each other, and

wherein two adjacent sections are separated by

a first displacement in the first direction and

a second displacement in the second direction,

wherein each of the plurality of rows includes a first number of writing points, each of the plurality of columns includes a second number of writing points, the at least two sections are configured to move along a scan direction between the first direction and the second direction, and the scan direction is chosen to form a continuous lithographic swath having a swath width in the second direction, and

wherein the second displacement is equal to the first displacement divided by a product of a total number of sections and the first number of writing points.

Claim 13 (canceled)

Claim 14 (canceled)

Claim 15 (currently amended): The writing points array apparatus of ~~claim 14~~ claim 12, wherein each of the writing points includes a lens.

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Claim 16 (currently amended): The writing points array apparatus of ~~claim 14~~ claim 12,
wherein each of the writing points includes an electron beam generating device.

Claims 17-20. (canceled)